



## PATENT COOPERATION TREATY

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## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>1128WOORD02</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, Item 5 below.	
International application No. <b>PCT/EP 03/08675</b>	International filing date (day/month/year) <b>06/08/2003</b>	(Earliest) Priority Date (day/month/year) <b>10/08/2002</b>
Applicant <b>ALTANA PHARMA AG</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

2. ☒ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

**PYRROLIDINEDIONE SUBSTITUTED PIPERIDINE-PHTHALAZONES AS PDE4 INHIBITORS**

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☐ None of the figures.

# INTERNATIONAL SEARCH REPORT

Inter Application No  
PC P 03/08675

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07D401/14 A61K31/502 A61P11/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07D A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BEILSTEIN Data, CHEM ABS Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,A	WO 02 085906 A (ALTANA PHARMA AG; STERK GEERT JAN (NL)) 31 October 2002 (2002-10-31) cited in the application Abstract; claim 1.	1-18
P,A	WO 02 064584 A (BYK GULDEN LOMBERG CHEM FAB; GUTTERER BEATE (DE); GRUNDLER GERHARD) 22 August 2002 (2002-08-22) cited in the application Abstract; claim 1.	1-18
A	WO 01 94319 A (BYK GULDEN LOMBERG CHEM FAB; STERK GEERT (NL); BYK NEDERLAND BV (N) 13 December 2001 (2001-12-13) cited in the application Abstract; claims 1-10.	1-18
-/-		

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*Z\* document member of the same patent family

Date of the actual completion of the international search

25 November 2003

Date of mailing of the international search report

03/12/2003

Name and mailing address of the ISA

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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP 03/08675

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>WO 98 31674 A (BYK GULDEN LOMBERG CHEM  FAB; STERK GEERT JAN (NL))  23 July 1998 (1998-07-23)  cited in the application  Abstract; claims 1-10.</p>	1-18

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP 03/08675

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
  
Although claims 17-18 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/JP 03/08675

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 02085906	A	31-10-2002	WO 02085906 A2	31-10-2002
WO 02064584	A	22-08-2002	CA 2438520 A1	22-08-2002
			EE 200300311 A	15-10-2003
			WO 02064584 A1	22-08-2002
			EP 1362044 A1	19-11-2003
WO 0194319	A	13-12-2001	AU 6233201 A	17-12-2001
			BR 0111440 A	03-06-2003
			CA 2411351 A1	13-12-2001
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			WO 0194319 A1	13-12-2001
			EP 1296956 A1	02-04-2003
			NO 20025811 A	04-02-2003
			US 2003195215 A1	16-10-2003
WO 9831674	A	23-07-1998	AT 233247 T	15-03-2003
			AU 735934 B2	19-07-2001
			AU 5862998 A	07-08-1998
			BR 9806752 A	14-03-2000
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			DE 69811645 D1	03-04-2003
			DK 971901 T3	10-06-2003
			EA 2764 B1	29-08-2002
			EE 9900274 A	15-02-2000
			WO 9831674 A1	23-07-1998
			EP 0971901 A1	19-01-2000
			HU 0001541 A2	28-05-2001
			IL 130659 A	25-07-2002
			JP 2001508078 T	19-06-2001
			NO 993301 A	10-09-1999
			NZ 336573 A	27-10-2000
			PL 334561 A1	13-03-2000
			PT 971901 T	31-07-2003
			SI 971901 T1	31-10-2003
			SK 95199 A3	10-12-1999
			TR 9901653 T2	21-10-1999
			US 6103718 A	15-08-2000